

IN THE CLAIMS:

Please amend the Claims as follows:

1. (currently amended): A training system for teaching the use of night vision goggles comprising:
- a. a pair of simulated night vision goggles;
 - 5 a. ~~b.~~ a system generating high fidelity, infrared, terrain simulation images;
 - ~~b.~~ c. a system in communication with said image generation system including weighted neutral density filters that optically combine the output of three 12-bit video signals and providing sufficient irradiance to an image intensifier tube to increase the dynamic range needed to reproduce
 - 10 effects to simulate direct viewing of bright lights such as produced by explosions and flares; and
 - d. a system for scan converting a resulting image generated at the output of said image intensifier tube for display on said simulated goggles including a high-resolution video camera to preserve the resolution and dynamic
 - 15 range of said image.
2. (canceled)
3. (currently amended): The training system in accordance with claim 1 including ~~for a system for scan converting the said~~ resulting image generated ~~to video at the output of said image intensifier tube for~~ and projecting the said image on a display screen.
4. (currently amended): The training system in accordance with claim 1 wherein said communication system includes:

a system allocating each of said three 12-bit video signals to a preselected portion or all of the total irradiance range representing scene elements of low, medium and high light intensity, ~~and~~
5 ~~a video camera for scan converting the resultant image to preserve its resolution and dynamic range.~~

X1 5. (currently amended): The training system in accordance with claim 1 including ~~for a~~ system for providing a stable image regardless of the simulated night vision goggle line of sight.

6. (original): The training system in accordance with claim 1 wherein said signal generation and communication systems are provided in a light tight package to maintain contrast.

7. (currently amended): A training system for teaching the use of night vision goggles comprising:

- a. a pair of simulated night vision goggles;
- 5 b. ~~a.~~ a system generating high fidelity, infrared, terrain simulation images; and
- c. ~~b.~~ a system in communication with said image generation system including weighted neutral density filters that optically combine the output of three computer radiated terrain images and providing sufficient irradiance to an image intensifier tube to simulate the entire range of natural
10 nighttime terrain irradiance including bright lights; and
- d. a system for scan converting a resulting image generated at the output of said image intensifier tube for display on said simulated goggles including a high-resolution video camera to preserve the resolution and dynamic range of said image.

8. (canceled)

9. (currently amended): A training system in accordance with claim 7 including a system for scan converting the said resulting image generated at the output of said image intensifier tube to video and projecting the said image on a display screen.

10. (currently amended): A training system in accordance with claim 7 wherein said communication system includes:

5 a system allocating each of said three computer radiated terrain images ~~12-bit video signals~~ to a preselected portion or all of the total irradiance range representing scene elements of low, medium and high light intensity, and

~~a high-resolution video camera for scan converting a resultant image to preserve its resolution and dynamic range.~~

11. (original): A training system in accordance with claim 7 including a system for providing a stable image regardless of the simulated night vision goggle line of sight.

12. (currently amended): A training system for teaching the use of night vision goggles comprising:

a. a pair of simulated night vision goggles;

5 ~~b. a-~~ a system generating high fidelity, infrared, terrain simulation images, and

~~c. b-~~ a system in communication with said image generation system including weighted neutral density filters that optically combine the output of three 12-bit video signals and for providing sufficient irradiance to an image intensifier tube to increase the dynamic range needed to reproduce effects to simulate direct viewing of bright lights ~~such as produced by explosions and flares;~~

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said communication system including a system allocating each of
said three 12-bit video signals to a preselected portion or all of the total
irradiance range representing scene elements of low, medium and high light
15 intensity, and

~~d.-e.~~ a high-resolution video camera for scan converting the
resultant image at the output of said image intensifier tube to preserve its
resolution and dynamic range and to display said image on said simulated
goggles; and

20 ~~e.-d.~~ a system for providing a stable image regardless of the
simulated night vision goggle line of sight;

said signal generation and communication systems are provided
in a light tight package to maintain contrast.

13. (canceled)

14. (currently amended): A training system in accordance with
Claim 12 wherein said scan converting system includes:

a system video displaying the resultant image generated at the
output of said image intensifier tube on a display server.

15. (currently amended): A method for simulating night vision as
seen through a pair of goggles comprising the steps of:

a. providing a pair of simulated goggles,
b. generating a high fidelity, infrared, terrain simulation image
5 viewable in said goggles,

c. optically combining the output of three computer radiated
terrain images through weighted neutral density filters;

~~e.-d.~~ simulating the entire range of natural night time terrain
irradiance including bright lights using three 12-bit video signals, and

10 ~~d. e.~~ scan converting the resultant image generated to video for
display through said simulated goggles.

16. (currently amended): The method of claim 8 15 wherein said
scan conversion includes the steps of:

- 5 a. allocating each of a said three, 12-bit video ~~signal~~ signals to
a preselected portion of the total irradiance range representing scenic elements
of low, medium and high light intensity,
- b. scanning the converted image to preserve its resolution and
dynamic range.

17. (original): The method of Claim 16 including the step of:
 rendering the generated image stable regardless of the simulated
night vision line of sight.

18 (original): The method of Claim 17 including the step of:
 maintaining contrast of said generated image.

19. (original): The method of Claim 18 including the step of:
 maintaining the contrast of said generated image by providing the
generating image in a light tight package.

20. (original): The method of Claim 15 including the step of:
 rendering the generated image stable regardless of the simulated
night vision line of sight.

21. (original): The method of Claim 15 including the step of:
 maintaining contrast of said generated image.

22. (original): The method of Claim 21 including the step of:

A.

maintaining the contrast of said generated image by providing the
generating image in a light tight package.
